

the removal of the panelled battlements, and the substitution of a parapet carved into fantastic notches or scrolls, or perforated with oval openings, and ornamented with obelisks, balls, busts, statues, and other singular decorations. These ran up the cables, which were often twisted into strange shapes, and some-

times wholly replaced by the level balustrade. Thus the most characteristic features of the old style, its numerous steep gables and spiry pinnacles, were succeeded by the uniform horizontal lines of the new. At length the whole building was surrounded by columns or pilasters, rising tier above tier, to the exhaus-

tion, sometimes, of the four orders,—open arcades took the place of the entrance porch,—and nothing remained of the Tudor style but the mullioned window, which, however, was of itself sufficient to give a peculiarly picturesque and old-fashioned aspect to the whole building.

(To be continued.)

THE THAMES TUNNEL.

THIS great work, recently brought to completion, after having been carried on for a series of years amid adverse circumstances and professional difficulties of a new and embarrassing kind, is one of the most successful efforts of hydraulic engineering existing. The idea of subaqueous communication was not new, having been very long ago proposed in the case of the towns of North and South Shields; and actually commenced between Gravesend and Tilbury, by Mr. Dodd, about the year 1800. It was early in 1823 that Mr. Brunel first proposed, and found powerful and influential friends, to advocate his plans for the present Tunnel; in 1824 a company was formed, and the preliminaries of subscriptions and the procurement of an Act of Parliament were successfully prosecuted, and the work commenced in March 1825. The detail of such an undertaking, presenting at every stage extraordinary features, and calling forth corresponding resources from the fertile and undaunted mind of the engineer, it is impossible for us at this moment to enter upon. From the first sinking of the shaft on the Rotherhithe side, to itself a great and novel work, to the corresponding opening at Wapping, the history of the Thames Tunnel is one of alternate difficulty and triumph.

With the assistance of "the shield," an invention which has been frequently described, the middle of the river had been reached in January 1828, when the danger of a second or third irruption of the superincumbent flood became more and more imminent, and this catastrophe happened on the 12th of August of that year, at a time too when the funds of the company were exhausted. We well remember the event, and the almost universal opinion that the work *could never be resumed*: in fact, it was not until the lapse of nearly seven years (1835) that the Government, after repeated applications, consented to make the requisite advances. The work now proceeded, but slowly, and with increased doubts and danger, the water every now and then impeding the miners. It may be sufficient at present to note that in the whole, five great floodings took place, each sufficient under any other superintendence to have put a period to the undertaking. Knight's "London" has the following

appropriate paragraph upon the first passage of Sir Isambard Brunel through the Tunnel, which we offer to our readers, with a cardinal reference to the volumes from which we extract it. "The reward for every difficulty, anxiety, or suffering, was at last obtained. It is pleasant even to have to record that on the 13th of August, 1841 Sir I. Brunel passed down the shaft recently erected at Wapping, and thence by a small driftway through the shield into the Tunnel. Under what a new aspect that beautiful double archway must have then appeared, even to him whose eyes had not for a single day forgotten to look upon it for many years! And, as he turned, what power must

have been felt in that little beam of light struggling through the driftway! The world must have appeared brighter from that moment. Nor should the labourers be forgotten, who, whilst expressing their admiration of him who had given method, firmness, and prosperity to their labours, in the cheering with which they greeted his appearance in the Tunnel from the opposite shore, deserve their word of respect and applause."

The Tunnel is twelve hundred feet in length. The arches twenty-two and a half feet high, and the double road-way thirty-eight feet broad. The total expense of construction approaches £250,000.



THAMES TUNNEL DESCENDING SHAFT AND STAIRS.



THAMES TUNNEL ENTRANCES.